

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method for producing a porous ceramic structure, comprising: a mixing and kneading step of mixing and kneading a clay material containing raw material particles and a pore-forming agent together with a dispersion medium to obtain a clay; a forming and drying step of forming the clay to obtain a formed ceramic body, and drying the formed ceramic body to obtain a dried ceramic body; and a firing step of firing the dried ceramic body to thereby obtain the porous ceramic structure,

wherein as the pore-forming agent, hollow particles (microcapsules) made of an organic resin are used, and as at least one type of the raw material particles, particles are used which contain 30 to 100 mass% of particles (spherical particles) having a circularity of 0.70 to 1.00 with respect to the total mass of the raw material particles.

2. (Original) The method for producing the porous ceramic structure according to claim 1, wherein the spherical particles have a circularity of 0.80 to 1.00.

3. (Currently Amended) The method for producing the porous ceramic structure according to claim 1-~~or~~2, wherein the clay is formed into a honeycomb shape in which a large number of cells are defined and formed by partition walls.

4. (Currently Amended) The method for producing the porous ceramic structure according to ~~any one of claims 1 to 3~~ claim 1, wherein the spherical particles are obtained by heating ceramic particles at a temperature in a range of a melting point ( $T_m$ ) of a ceramic to  $T_m + 300^\circ\text{C}$ .

5. (Currently Amended) The method for producing the porous ceramic structure according to ~~any one of claims 1 to 3~~ claim 1, wherein the spherical particles are obtained by crushing the ceramic particles with a jet air current.

6. (Currently Amended) The method for producing the porous ceramic structure according to ~~any one of claims 1 to 5~~ claim 1, wherein as the raw material particles, there are used cordierite ( $2\text{MgO} \bullet 2\text{Al}_2\text{O}_3 \bullet 5\text{SiO}_2$ ) forming material particles composed of silica ( $\text{SiO}_2$ ) particles, kaolin ( $\text{Al}_2\text{O}_3 \bullet 2\text{SiO}_2 \bullet 2\text{H}_2\text{O}$ ) particles, alumina ( $\text{Al}_2\text{O}_3$ ) particles, aluminum hydroxide ( $\text{Al}(\text{OH})_3$ ) particles and talc ( $3\text{MgO} \bullet 4\text{SiO}_2 \bullet \text{H}_2\text{O}$ ) particles, and as at least one type of the silica ( $\text{SiO}_2$ ) particles, the alumina ( $\text{Al}_2\text{O}_3$ ) particles and the aluminum hydroxide ( $\text{Al}(\text{OH})_3$ ) particles, there are used particles which contain 30 to 100 mass% of the spherical particles with respect to the total mass of the particles.

7. (Original) The method for producing the porous ceramic structure according to claim 6, wherein the spherical particles are obtained by heating the silica ( $\text{SiO}_2$ ) particles in flame at a temperature in a range of 1730 to 2030°C.

8. (Currently Amended) The method for producing the porous ceramic structure according to claim 6 ~~or 7~~, wherein the spherical particles are the silica ( $\text{SiO}_2$ ) particles having an average particle diameter of 5 to 50  $\mu\text{m}$ .

9. (Currently Amended) The method for producing the porous ceramic structure according to ~~any one of claims 1 to 8~~ claim 1, wherein the mixing and kneading step mixes

and kneads the mixed material together with the dispersion medium at a reduced pressure of -40000 Pa to -93000 Pa to thereby obtain the clay.

10. (Original) A porous ceramic structure obtained by: forming a clay obtained by mixing and kneading, together with a dispersion medium, a clay material containing silica ( $\text{SiO}_2$ ) particles, kaolin ( $\text{Al}_2\text{O}_3 \bullet 2\text{SiO}_2 \bullet 2\text{H}_2\text{O}$ ) particles, alumina ( $\text{Al}_2\text{O}_3$ ) particles, aluminum hydroxide ( $\text{Al}(\text{OH})_3$ ) particles, talc ( $3\text{MgO} \bullet 4\text{SiO}_2 \bullet \text{H}_2\text{O}$ ) particles and a pore-forming agent; drying the clay; and firing the clay, the porous ceramic structure containing cordierite ( $2\text{MgO} \bullet 2\text{Al}_2\text{O}_3 \bullet 5\text{SiO}_2$ ) as a main constituting component and having a porosity of 60 to 72% and an average pore diameter of 15 to 32  $\mu\text{m}$ ,

wherein as the pore-forming agent, hollow particles (microcapsules) made of an organic resin are used, and as at least one type of the silica ( $\text{SiO}_2$ ) particles, the alumina ( $\text{Al}_2\text{O}_3$ ) particles and the aluminum hydroxide ( $\text{Al}(\text{OH})_3$ ) particles, particles are used which contain 30 to 100 mass% of particles (spherical particles) having a circularity of 0.70 to 1.00 with respect to the total mass of the particles.

11. (Original) The porous ceramic structure according to claim 10, having a honeycomb shape in which a large number of cells are defined and formed by porous partition walls.

12. (Original) The porous ceramic structure according to claim 11, further comprising:

plug portions which alternately plug one opening of the large number of cells and the other opening thereof.